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**REQUEST FOR ORAL HEARING BEFORE
THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Docket Number (Optional)

3351-029A

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 [37 CFR 1.8(a)] on _____

Signature _____

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name _____

In re Application of

Michael D. Ladwig

Application Number
10/017,739

Filed
12/18/01

For **System & Method for Ensuring &
Managing Situation Awareness**

Art Unit
2114

Examiner
Bonzo, Bryce P.

Applicant hereby requests an oral hearing before the Board of Patent Appeals and Interferences in the appeal of the above-identified application.

The fee for this Request for Oral Hearing is (37 CFR 1.17(d))

\$ 280.00

☐ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is:

\$ _____

☐ A check in the amount of the fee is enclosed.

☒ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of this sheet.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 07-1337. I have enclosed a duplicate copy of this sheet.

☐ A petition for an extension of time under 37 CFR 1.136(b) (PTO/SB/23) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record. 37,093
Registration number

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34. _____

Kenneth M. Berner
Signature

Kenneth M. Berner, No. 37,093
Typed or printed name

703-684-1111
Telephone number

August 30, 2004
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.194(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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9/22/04**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	
Inventor(s): MICHAEL D LADWIG	: Confirmation No. 9729
U.S. Patent Application No. 10/017,739	: Group Art Unit: 2114
Filed: December 18, 2001	: Examiner: BONZO, BRYCE P.
For: SYSTEM AND METHOD FOR ENSURING AND MANAGING SITUATION AWARENESS	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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REPLY BRIEF

This Reply Brief is responsive to the Examiner's Answer mailed June 29, 2004, and is directed only to the new points of argument raised in the Answer.

Reply to Examiner's Response to Argument begins on page 2.

In the Answer, the Examiner contends that the "gathering heterogeneous data, as directed by the presence..." of claim 1 is disclosed (column 4, lines 5-56 of the McCreery reference. However, this portion of the McCreery reference merely discusses gathering data, but not as directed by the presence.

Further, the Examiner contends that McCreery discloses an agent. An agent is a software agent which is defined as "a process that lives in the world of computers and networks and that can operate autonomously to fulfill a set of tasks." See pages 17-18 (attached) of "Agent Technology Handbook" by Dimitris N. Chorafas, McGraw-Hill Series on Computer Communications, Chapter 1: Things That Think", The Role of Autonomous Agents, 1998.

For the foregoing reasons and the reasons presented in the Appellant's main Brief, the rejection of claims 1, 4-6, 8, 14-19, 22, 24, 26, 28 and 29 under 35 U.S.C. 102(e) and claims 2, 14, 20, 23, 25 and 27 under 103(a) should be reversed.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN GILMAN & BERNER, LLP



Kenneth M. Berner
Registration No. 37,093

1700 Diagonal Road, Suite 310
Alexandria, Virginia 22314
Telephone: (703) 684-1111
Facsimile: (703) 518-5499
Date: August 30, 2004

McGraw-Hill Series on
Computer Communications

Agent Technology Handbook

KQML

WebBots and
Virtual Agents

WAXYZ
Agents for Y2K

Dimitris N. Chorafas

- Learn a great deal about their master
- Be able to interpret correctly what he or she wants

An obvious and important query is, how long will it take for active objects to become part of our everyday life? While exact dates cannot be stated, it is sure that it will not take over 100 years as has happened with other technologies. Facsimile technology, for instance, was developed in 1842 by Alexander Bain, a Scottish clock maker, but only in the 1980s did Sharp, Canon, Ricoh, and Toshiba popularize digital fax with fast, low-cost machines.

The evolution of fax is a good lesson! Admittedly, there had been intermediate developments, but no mass market. In the early 1920s, German inventors improved the process, permitting photographs to be sent overseas. Then AT&T, RCA, and Western Union developed systems that transmitted pictures for newspapers and weather maps. The market for such applications, however, was, at best, restricted, and therefore stagnant.

By contrast, the Japanese addressed the mass market—and that's what agents try to do. Not only have the first agents already appeared but they are also functioning in growing numbers of implementation domains.* Over the next few years we will see a progression toward increasingly smarter, more capable agents—not only from things that think, but also in a myriad of other projects.

Ovum of London forecasts that the combined American and European market for agents will grow to \$2.6 billion by the year 2000. Their functions will include messaging and information retrieval—two domains projected to account for more than half of the agents' market. I personally think that instructable agents will be the hottest-selling class.

Another projection is that, before the year 2000, agents will not be constructed but will develop themselves using the tools made available through high technology. After all, the concept of agents is a direct descendent of Turing's machine, von Neumann's automata theory, and McCulloch's artificial intelligence (as we will see in a later section), all of which support the notion of self-adaptive, self-perpetuating artifacts.

The Role of Autonomous Agents

Dr. Pattie Maes, who manages the Media Lab's autonomous agents group at MIT, defines a software agent as "a process that lives in the world of

*Many implementation examples will be given in this text. Part 2 focuses on the domain of telecommunications.

computers and networks and that can operate *autonomously* to fulfill a set of tasks." Her definition distinguishes software agents on the basis of:

- Their affiliation
- The role they play
- The nature of their intelligence

A *userbot*, Maes says, works for one user, knows that user's interests, habits, and preferences, and acts on the user's behalf. Examples of this type of an agent are a personal news editor and an electronic shopper that may, for instance, operate on the Internet.

By contrast, a *taskbot* performs more generally useful tasks for a group of users or for all the users on a network. For instance, a taskbot might index the World Wide Web, do network load balancing, or perform diagnostics. We will see plenty of examples of taskbots in Part 3.

This distinction is useful, but to avoid dichotomies that some time down the line may prove to be irrational, I prefer to use the terms *agent* and *knowledge robot* (or *knowbot*) interchangeably. Dr. Maes's work is important in that it is

- Oriented toward *learning agents*
- Stresses the development of collaboration among knowledge artifacts

As we saw earlier, the notion of instructable agents is fundamental. It underpins the new software paradigm, which should not be procedural, hence algorithmic, but rather heuristic. An agent can learn not only from its master but also from its peers by:

- Querying other agents via a bulletin board
- Asking peers what they would do in the present situation

Agents should also be able to learn, over time, which peer agents are good sources for particular types of information. Far from being theoretical, these concepts have a very practical applications domain that we should be willing and able to exploit.

Several software agents have been implemented at the media lab, among other organizations. *Maxims*, for example, is an e-mail-handling agent that works with personal computers.⁷ It can assign priorities to

⁷See also in Chap 2 the discussion on Mondrian.